

Thomas Street  
Attorney Advisor  
NOAA Office of General Counsel for Ocean Services  
1305 East-West Highway  
Room 6111  
Silver Spring  
MD 20910

30 May 2008

Dear Sir

**Re Appeal of Mr G Walter Swain against the State of Delaware's objection to the proposed construction of a Marina and associated structures at the confluence of Cedar Creek and Mispillion River in Milford Delaware**

I am an expert shorebird biologist who has worked on the shorebirds throughout the world for the last 30 years. I have studied the shorebirds migrating through Delaware Bay since 1998. I work for the British Trust for Ornithology which is an independent scientific research organization which does not campaign but provides advice on ornithological issues.

My comments below are based on the premise that the United States recognizes the importance of migratory shorebirds through treaty agreements such as the Migratory Bird Treaty Act. It is my view that a marina in the Mispillion Harbor complex (at the location marked on the picture below) would be detrimental to the species covered by these acts. Red Knot has been recognized as a candidate species for listing as an endangered species by USFWS and the research that I have done on the species convinces me that that Mispillion Harbor is the most critical area in the whole of the Americas for the species survival.

The information below outlines my reasoning. Shorebirds come to Delaware Bay to feed on the eggs of Horseshoe Crabs which are laid on its beaches each spring. The highest densities of these eggs are found on the beaches in Mispillion Harbor. Mispillion is the critical site in Delaware Bay for Red Knot and other shorebirds due to its densities of Horseshoe Crab eggs, enclosed nature and range of feeding sites with different aspects. This allows birds to find feeding beaches where eggs are available on or near the surface in most weather conditions with limited disturbance. The most important beach for shorebirds is beach 1 (on picture below) with beaches 2 and 3 being extremely important at certain states of tide or in poor weather conditions. The birds move between the three beaches depending on weather conditions and food supplies. Beach 4 is used to a lesser extent, but is still extremely important in some weather conditions. The other main site of importance is the island that exposes at low tide (5 on picture below). This is used as a major low-tide roosting and bathing site. Its importance lies in the fact that it is a safe roost and is close to good feeding beaches.

Mispillion Harbor is currently used by a large number of boats which normally travel past the beaches used by birds on their way down the channel. These boats normally cause very little disturbance as they do not stop on or by the beaches or suddenly change speed when close to the shore. The beaches and banks at the proposed marina site are used by flocks of feeding shorebirds

and roosting shorebirds especially Ruddy Turnstone, but it is not as important as the beaches numbered in the picture. These are however more important for shorebirds than sites of a similar size outside the harbor on the bay shore in Delaware.

The specific concerns that I have about this proposal are:

- 1 The presence of a marina in this central location within the harbor will lead to a considerable increase in disturbance on the key beaches (2 and 3) and around the roost island. This will result from passing traffic being forced to stop for docking boats and boats waiting to dock. In addition, if there are any problems with a boat that has just left the dock it is likely to land on one of these beaches. Occasional landings with little disturbance will not effect the birds but the levels that are likely to occur at times like Memorial weekend (which is at the peak time for the shorebirds) are likely to be highly detrimental to the integrity of the site to migrant shorebirds.
- 2 There will be considerable increase in the noise level in the area. While shorebirds will accommodate to regular noises they will be disturbed by sudden loud noises.
- 3 Boat traffic is likely to pass closer to beaches 3 and 4 than they do at the moment especially if the old retaining pilings are removed. This will increase the level of disturbance.
- 4 The presence of the marina is likely to lead to increased dredging in the area leading to accelerated erosion of the sand from the beaches at a time when there is a need to recharge the sand on beaches 3 and 4.

I consider that the above points will mean that a Marina at the proposed site will reduce the survival of Red Knot and other shorebirds that depend on Delaware Bay on their spring migration north to the Arctic.

Yours sincerely

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Mispillion Harbor with the locations mentioned in the letter